

CFO-BAS-X-801

General Description and Installation

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1. GENERAL INTRODUCTION

1.1. Document Purpose

This document provides installation instructions for the fiber optic cable crew to properly install an expanded, 2-piece, split base (referred to as the 'base') of a Charles Industries' BDO™, CFDP™, CFFP, CFXC or CFDP2™ Pedlock® pedestal in Outside Plant (OSP), buried fiber cable applications. These base installation instructions apply whether the fiber feed or drop cable installation is a loop through, branch, home-run or stub-end configuration. For instructions on how to perform cable preparations and fiber splicing at the pedestal organizer (in the protected top section of the pedestal), see the separate cable preparation/fiber management instructions that are attached to the fiber organizer.

1.2. Product Purpose

The Charles Pedlock® pedestal is an above-grade device that provides environmental protection for buried feed and distribution cables, as well as customer service drops in Fiber-to-the-Home (FTTH) and Fiber-to-the-Premises (FTTP) deployments.

1.3. Product Mounting and Location

The pedestal base is installed (per local practice) in a trench or hole in the ground, up to the Ground Line (GL) indicator, at the FTTP or FTTH distribution point. When the base is installed, the pedestal is easily secured with the overlapping outdome. The outdome is secured to the base with a self-locking latch.

2. PRODUCT DESCRIPTION

Charles' free breathing pedestal offers superior OSP protection against flood, fire, dirt, weather, salt-fog, insects, and impact. The pedestal's expanded capacity, split base can be opened to install around less flexible cables, innerduct, or conduit fed cable bundles in new construction, around existing cable or conduit in pedestal replacement or rehabilitation applications. The square design and ribbed walls provide extra stability. The base features a drop cable access port that eliminates the need for extensive digging around the base when adding service drop cables.

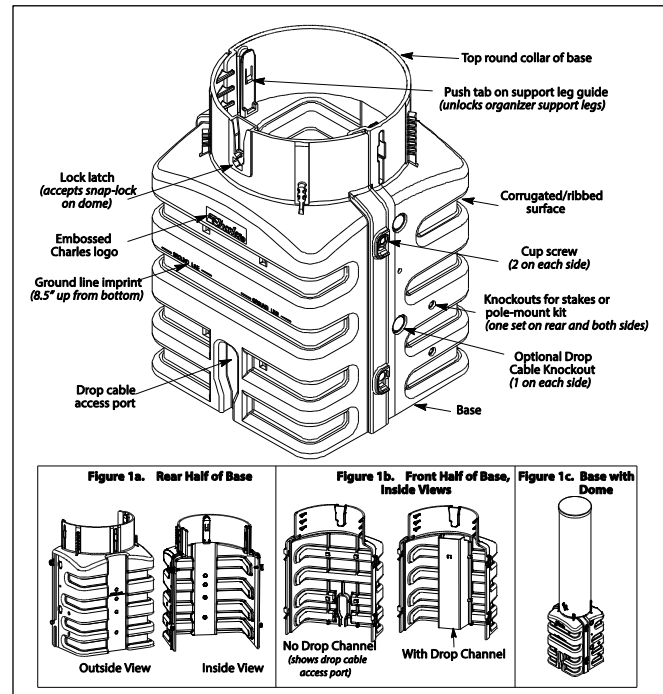


Figure 1 Expanded Base of Charles Pedlock® Pedestals

3. SAFETY PRECAUTIONS

— WARNING —

Risk of serious eye damage! Never look into the end of a fiber optic line or use a magnifier in the presence of laser light or radiation. Exercise caution when installing, testing or maintaining live circuits. If eyes are exposed to laser light or radiation occurs, immediately seek treatment by a medical professional.

— WARNING —

Cable and fiber cleaning solvents may contain hazardous or harmful materials. Maintain good housekeeping practices and refer to the MSDS when working with cleaning solvents or similar products.

Shards and cleaved glass fibers are very sharp and can easily pierce the skin. Use industry standard procedures to pick up and store cut glass fibers in appropriate container. Do not consume any food products near the cable installation site.

Corrugated metal or armor in feed cables is very sharp when cut or exposed. Exercise extreme caution to prevent personal injury. Use protective work gloves when handling armored cable.

Do not damage any buried cables or service wires when digging to expose cables or to prepare a hole or trench, or when driving stakes.

Buffer tubes and fibers are sensitive to excessive bending, pulling, and crushing forces. To avoid kinking the buffer tubes and fiber damage or breakage, exercise great care when working with fiber, and do not exceed/violate minimum bend radius requirements for fibers, buffer tubes, and cables.

— CAUTION —

Perform all bonding and grounding prior to making any electrical and communications connections.

4. INSTALLATION

Follow the steps in Section 4.1 to install a Charles expanded pedestal base in a trench. Follow company practice concerning to bonding/grounding procedures. See Section 4.2 for UMS stake and pole mounting instructions.

4.1. Installing an Expanded Pedestal Base

Step #	Instruction
Preparing the Installation Site	
1	Prepare trench. Be careful not to damage any buried cables or wires while digging. Dig and prepare the cable trench, per local company practices.
2	Establish an earth ground. Verify an earth ground is accessible and available at or near the pedestal base installation site.
3	Place cables, conduit or innerduct in trench. Place or lay cable/conduit in the trench per local practice. In the final position, conduit height should be 1.5 inches below the bottom of the base collar, but no higher than the bottom of the collar. Note: The most accurate cut can be made after the base has been set to its proper depth.
4	Prepare and allow sufficient cable loop or tail. Loop-through/express cable applications require a 15' +/- 2' loop, measured from the ground line. Tails should be a minimum of 8.5', measured from the ground line.
Preparing the Pedestal	
5	Unpack and inspect equipment. Unpack and inspect the pedestal. Remove the pedestal from the shrink wrap/skid and inspect for damage. If the equipment has been damaged in transit, immediately report the extent of the damage to the distributor or carrier.
6	Obtain tools, materials and equipment. Assemble the following tools and equipment to perform the pedestal base installation. <ul style="list-style-type: none"> <li style="display: inline-block; width: 45%; vertical-align: top;"> <ul style="list-style-type: none"> • 216 tool/can wrench • Level • Tape measure • Hammer/mallet • Work gloves • Soil tamping tool(s) <li style="display: inline-block; width: 45%; vertical-align: top;"> <ul style="list-style-type: none"> • Charles pedestal of choice • Clean, dry, pea gravel (approved 3/8"-5/8" diameter only) • Cable loop/stub management hardware & equipment • Safety glasses • Cable grounding materials and equipment
7	Remove dome from base. Use a 216 tool/can wrench and turn the hex lock 1/4 turn CCW. Hold the wrench in this position and lift the dome from the base. Do not discard the red moisture barrier sheet.

8	<p>Remove the attached backboard/fiber organizer. The fiber organizer is shipped in place and is removed by pressing the push tab inside one leg and lifting slightly. Press the tab inside the second leg and lift the organizer away from the base. Note: Follow this procedure to remove the organizer from any Charles pedestal.</p>	
9	<p>Open the base (optional). Loosen both hex cup screws to their stops and lift the front half of the base away from the rear half.</p>	
10	<p>Remove knock-outs (if required). Generally, the stake, if used, is attached at the rear of the base, which has the knockouts already removed. For different mounting positions, the knockouts must be removed. Pierce the material around the recessed portion with a utility knife, working the blade into several locations around the knockout. After the blade has been pushed through the material at these locations, the knockout can be removed.</p>	
11	<p>Install UMS stakes or pole-mounting bracket (if required). Install either the UMS stake or pole-mount bracket as shown in either Figure 3 or Figure 4. See Section 4.2 for installation instructions.</p>	
12	<p>Remove the drop channel/install foam plug. Note: If all the cables are routed in conduit, the drop channel can be filled with pea gravel for additional rodent intrusion protection, or the drop channel can be replaced with a drop channel cover (Charles kit, part number 97-DRPHOLCVR).</p> <p>Four tabs hold the drop channel in position. Squeeze the drop channel to release it from the two tabs on one side and then on the other. Note: For either the BDO or CFDP, a poly bag of parts (foam plug, instruction set, etc.) is taped to inside of the drop channel. Remove this bag and put it aside for future use.</p> <p>To help prevent both backfilling the drop channel and for rodent intrusion protection, place the foam plug inside the drop channel. First push one side down until it rests on the bent tab inside the channel and then push the second side so it rests on the top rib of the base. An alternate method is to first position the pad in the detached channel before installing it.</p>	
13	<p>Install the drop channel. Installation of the channel is the reverse of that shown in Step 12.</p>	
<p>Placing and Installing the Pedestal Base</p>		
14	<p>Assemble the base. If the cable loop or tail can be fit through the base collar, the two halves can be assembled prior to positioning the base. Lift the front half over and onto the two locking bolts and the two tabs. Level both halves and lock them in place by tightening the two base bolts.</p>	
15	<p>Determine base installation location. Position the base in the approximate desired position in the trench. The front or drop side of the base (Charles logo) generally faces the street. Using either the back half of the base or the entire assembly, position the feed cables/conduit towards the rear of the base. Note: This positioning facilitates the attachment of cable(s) during splicing procedures.</p>	
16	<p>Place/prepare earth ground. Always follow local codes and company practice when preparing earth ground and when grounding cables/equipment. Per local company practice, prepare an earth ground for the pedestal at or near the base.</p>	
17	<p>Position and level base in trench and begin backfill. Position the base and level per company practice. Note: Maintain this level as backfill is being added and tamped. Once the cables/conduit has been positioned, the base can be placed in the trench</p>	

	<p>(with the optional attached stake, see Figure 3 and Step 2.). As the trench is backfilled, periodically tamp the soil, always pushing the soil towards the base. This practice helps to remove air from the backfill soil, making settling less likely to occur (see Figure 2.). The base is designed to maintain its orientation after installation; therefore, it is important to verify that the base is level during the entire installation procedure.</p> <p>Note: Should it be necessary to straighten a pedestal at any future time (such as in the event of uneven ground settling), never attempt to straighten an installed pedestal by manipulating, pushing, or pulling on the attached dome, as pedestal damage may result. To re-plumb and straighten a pedestal post-installation, first remove the soil from around the base, then re-adjust the base until a proper level is achieved.</p>	
18	<p>Install backfill soil, moisture barrier and pea gravel. Referring to Figure 2, alternately backfill the base, inside and outside, tamping the soil as it is added. The soil on the inside of the base should be even with the top of the second rib from the bottom. On the outside, the backfill should be even with or above the Ground Line. Adding backfill one rib higher, and close to the Charles' logo, will make the base more stable. Caution: Never mound backfill soil on the outside of the base to make it appear that the base has been installed to the recommended depth, as this mound will wash away.</p> <p>When the internal backfill is at the proper height, install the red moisture barrier. Plug all open conduits prior to pouring in any pea gravel. Referring to Figure 2, pour 5 to 6 inches of pea gravel into the base. The gravel should be no higher than the uppermost rib. Note: If the conduit has been trimmed to the height described in Step 3, the gravel will be 1 to 1.5 inches below the top of the duct.</p>	
19	<p>Place/route drop cable (optional). Place available drop cable(s) at this time. Route direct buried cable through the drop channel access port and up into the top of the base. Leave a minimum tail of 8.5' long, measured from the ground line. The foam plug can be sliced to allow for the installation of a drop cable. A cut (not a hole) can be made in the pad so that it can seal and fit around the cable. See Step 12, Installation of the Foam Plug.</p>	<p>Base Interior View Front Half Foam plug Drop cable (Slide plug into channel, set on bent flange & first rib of base) Bent flange Drop cable hole Channel, installed</p>
20	<p>End of base installation—determine next procedure. If performing feed or drop cable preparation, perform attachment and splicing processes at this time. Locate the document typically shipped with and attached to the pedestal organizer that describes fiber cable preparation and splicing procedures and continue with the steps in that document.</p> <p>If cable splicing is not done at this time, perform either A or B.</p> <p>(A) If company practice recommends leaving the installed base without attaching the organizer or dome, loop the cable for future fiber splicing operations.</p> <p>(B) If the local practice calls for attaching the organizer and installing the dome, proceed with the next step. Caution: Follow bend radius requirements to avoid damaging cable if looping or coiling sheathed cables inside the dome.</p>	
21	<p>Install fiber organizer. The installation is the reverse of Step 8. A key on each leg allows it to be oriented in only one direction. Align the legs onto the tabs on the sides of the base collar. Push down until two audible clicks are heard.</p>	<p>Align support legs with leg guides on base collar Once aligned, press down on each leg until it "clicks" into place Support leg Leg Guide Cable Base front removed for visual clarity.</p>
22	<p>Install dome(s). Note: The dome can only be fully installed when there is no cable in the way. CFDP-EPS pedestals have an inner (black) dome that fits over the organizer and snaps onto the top snap clip. Position the outer dome and align the lock with the base latch.</p>	<p>Align dome snap lock with latch-catch in base collar</p>

4.2. Installation Instructions for Stakes and Pole Mount Kits

Step #	Instruction
1	Prepare the trench, base and cable. Perform Steps 1 through 16 of Section 4.1 prior to installing either a UMS stake or pole mount bracket.
2	Select base & kit mounting holes. The factory removed knockouts will work for most applications. Follow the procedure shown in Step 10 to remove any knockouts.
3	Attach stake or bracket. Refer to Figure 3 or Figure 4, depending on which device is to be attached. The pole mount U-bracket can be removed and adjusted to fit other than factory removed knockouts. If the factory knockouts are to be used, no adjustment

	<p>is required.</p> <ol style="list-style-type: none"> (1) Remove and set aside the lag bolts (used for pole attachment) factory attached to the kit's long bar. (2) Remove the outermost first set of nuts and washers from the carriage bolts that are factory preinstalled in two of the kit's lowest holes. (3) [Optional] Adjust the U-bracket positioning on the bar and the carriage bolt locations. The kit is shipped with the U-bracket aligned with and attached to the bottom of the bar. If different holes (or bolt positions) are chosen to adjust the kit's vertical mounted position on the base or pole, remove the carriage bolts and re-attach them in the correct holes. Note that the U-bracket can be raised or lowered on the bar approximately 3", for the specific pole/post installation in question. Once repositioned, reconnect the U-bracket to the bar. First, abut the wide, flat, edge of the U-bracket against the bar. Next, insert the carriage bolts through the correct bar holes and then through the correct U-bracket holes. Secure by placing a flat washer then a lock washer onto each bolt, then thread a nut all the way onto each bolt and firmly tighten each nut.
4	<p>Attach stake or kit to base. Attach the pole-mount kit or stake to the base by aligning the mounting bolts to the desired knockouts. Next, press the U-bracket or stake to the base and insert the bolts into the base holes. Place a 2" diameter washer and lock washer onto each bolt. Tighten to a maximum of 75 in-lbs. Use only the supplied galvanized hardware.</p>
5	<p>Mark mounting holes on pole or post (pole mount only). Place the base and pole mount kit against the post. Mark the positions where the lag bolts will be placed, then install the lag bolts.</p>
6	<p>Attach base to pole or post. Per company practice, install the lag bolts to secure the kit to the pole/post. To install the bolts, lift the base into place, align the holes at the top of the pole-mount kit's bar with the marked or predrilled holes on the pole or post, then insert, tap, or start the bolts. Hold the base/kit in place and tighten the bolts.</p>
7	<p>Continue with any applicable installation steps from Section 4.1. (Steps 18 through 22)</p>

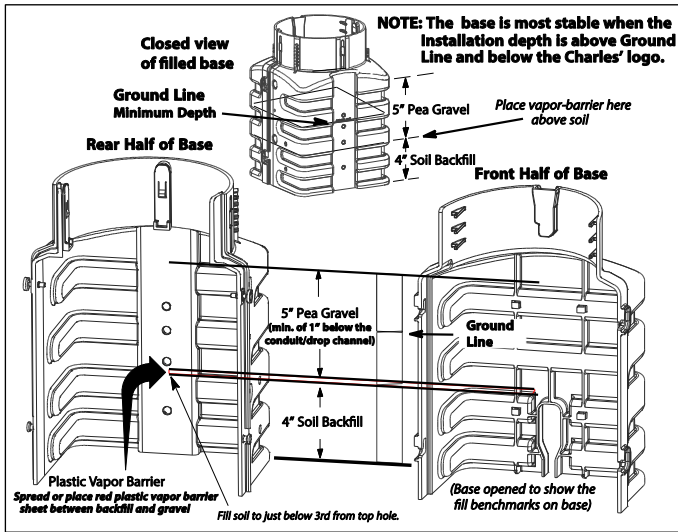


Figure 2 Backfill Levels Inside the Base

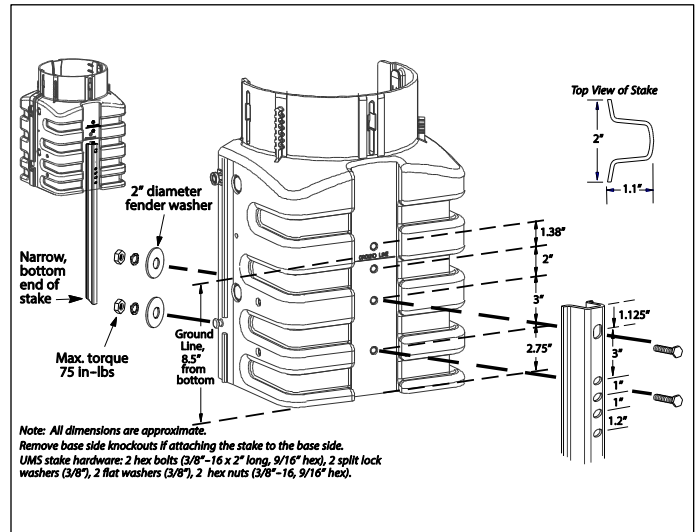


Figure 3 Mounting the UMS Stake on the Base

Note:

Install conduit/duct no higher than the bottom of the base's collar (neck) or the top of the drop channel.

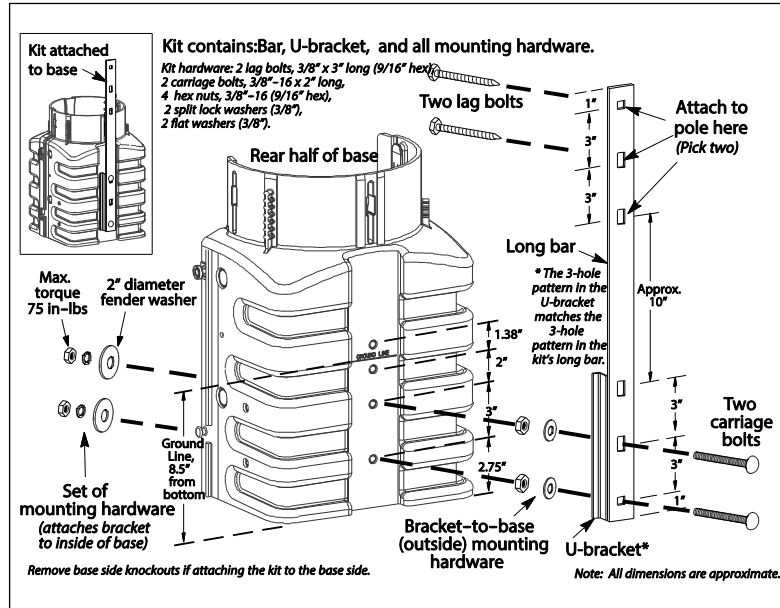


Figure 3 Installing the Pole Mount Bracket Kit

5. TECHNICAL ASSISTANCE AND REPAIR SERVICE

For questions on product repair or if technical assistance is required, contact Charles Technical Support.

847-806-8500
techserv@charlesindustries.com (email)
<http://www.charlesindustries.com/techserv.htm>

6. CUSTOMER SERVICE

For customer service assistance, contact your Charles Customer Service Representative.

847-806-6300
mktserv@charlesindustries.com (email)
http://www.charlesindustries.com/main/telecom_sales_support.htm

7. SPECIFICATIONS

Feature	6" Pedestal	8" Pedestal	10" Pedestal	12" Pedestal
Height, base only, incl. collar	18 in.	18 in.	18.5 in.	18.5 in.
Height, base bottom to ground line	8.5 in.	8.5 in.	8.5 in.	8.5 in.
Height, dome top to ground line	34.5 in.	34.5 in.	34.5 in.	34.5 in.
Depth, base (front to back)	9.75 in.	10.8 in.	12.8 in.	15.1 in.
Width, base (side to side)	10.25 in.	11.75 in.	13.9 in.	16.1 in.

Table 1 Pedestal Base Physical Specifications

NOTE: All dimensions are approximate. See the organizer document for more specifications.